

APPLICANT(S): NAFTALI, Matan
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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

LISTING OF CLAIMS

1. (**Currently amended**) A method for ~~[[providing]]~~ producing a vertical comb drive, the method comprising:
fabricating a device comprising a rotor comb element, the rotor comb element ~~[[comb]]~~ comprising a main body and a plurality of substantially parallel extensions in a comb arrangement, and at least one ~~of a plurality of~~ stator comb ~~[[elements]]~~ element, each of said at least one stator comb element comprising a main body and a plurality of substantially parallel extensions in a comb arrangement, ~~adapted to be~~ interlaced with the rotor, all ~~[[on]]~~ from a single layer of a substrate;
repositioning said at least one stator comb element with respect to the rotor comb element so as to establish an elevation gap between an external surface of said at least one stator comb element and a corresponding external surface of the rotor comb element; and
fixing the repositioned rotor comb element and said at least one stator comb element to each other at a rotation axis.
2. (**Currently amended**) The method of claim 1, wherein said at least one stator comb element ~~of a plurality of stators comprise~~ comprises two, substantially opposite ~~[[stators]]~~ stator comb elements, wherein the rotor comb element is located between the two ~~[[stators]]~~ stator comb elements.
3. (Original) The method of claim 1, wherein fabricating of the device is done in a micro-machining process.
4. (**Canceled**)
5. (**Currently amended**) The method of claim 1, comprising using ~~[[wherein]]~~ displacement limiters ~~[[are used]]~~ to limit ~~displacement~~ rotation of the rotor.

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6. (Original) The method of claim 5, wherein the displacement limiters comprise edges of slits in a surrounding body.

7. (**Currently amended**) The method of claim 1, wherein the rotor comb element and said at least one ~~of a plurality of stators~~ stator comb element are each suspended on flexible supports.

8. (**Currently amended**) The method of claim 7, wherein the flexible supports are used to reposition the rotor with respect to said at least one stator comb element ~~of a plurality of stators~~, so as to achieve realignment.

9. (Original) The method of claim 7, wherein the flexible supports have nonlinear kinematic-dependent rigidity.

10. (**Currently amended**) The method of claim 1, wherein the rotor comb element is provided with two substantially opposite torsion bars that define a rotation axis substantially near adjacent an external surface of the rotor comb element.

11. (Original) The method of claim 10, wherein the external surface is an upper surface.

12. (Original) The method of claim 11, wherein the external surface is a bottom surface.

13. (**Currently amended**) The method of claim 1, wherein the thickness of the extensions of said at least one ~~of a plurality of stators~~ stator comb element is greater than the thickness of the extensions of the rotor comb element.

14. (**Currently amended**) The method of claim 1, wherein the rotor comb element is ~~positioned~~ repositioned in an elevated position with respect to said at least one ~~of a plurality of stators~~ stator comb element.

15. (**Currently amended**) The method of claim 1, wherein the rotor comb element is ~~positioned~~ repositioned in a lowered position with respect to said at least one ~~of a plurality of stators~~ stator comb element.

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16. **(Currently amended)** The method of claim 1, further comprising controlling motion of the rotor comb element by selecting frequencies of rotor motion thereby determining a first time interval of confined motion characterized as the time during which the motion of the rotor comb element is limited by motion limiters and direction of motion is ~~reversed~~ reversed and a second time interval during which the motion of the rotor comb element is not limited, and tuning the frequencies to a ~~desired~~ determined ratio between ~~the~~ the first time interval and the second time interval.

17. **(Currently amended)** The method of claim 1, comprising using ~~wherein~~ a driving alternating voltage ~~is used~~ to achieve a periodic switching frequency of the rotor comb element.

18. **(Currently amended)** The method of claim 1, wherein the rotor comb element comprises a micro-mirror.

19. **(Currently amended)** A vertical comb drive device comprising:
a rotor comb element, the rotor comb element ~~comprising~~ comprising a main body and a plurality of substantially parallel extensions in a comb arrangement, and at least one ~~of a~~ plurality of stator comb ~~elements~~ element, comprising a main body and a plurality of substantially parallel extensions in a comb arrangement, ~~adapted to be~~ interlaced with the rotor comb element, ~~all on a single layer of a substrate~~ wherein said at least one stator comb element is repositioned with respect to the rotor comb element so as to establish an elevation gap between an external surface of said at least one stator comb element and a corresponding external surface of the rotor comb element, and wherein the repositioned rotor comb element and said at least one stator comb element are fixed to each other at a rotation axis.

20. **(Currently amended)** The device of claim 19, wherein said at least one ~~of a~~ plurality of stators ~~comprise~~ stator comb element comprises two, substantially opposite ~~stators~~ stator comb elements, wherein the rotor comb element is located between the two ~~stators~~ stator comb elements.

21. **(Canceled)**

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22. (**Currently amended**) The device of claim 19, ~~[[wherein]]~~ comprising displacement limiters ~~[[are used]]~~ to limit ~~displacement~~ rotation of the rotor comb element.
23. (Original) The device of claim 22, wherein the displacement limiters comprise edges of slits in a surrounding body.
24. (**Currently amended**) The device of claim 19, wherein the rotor comb element and said at least one ~~of a plurality of stators~~ stator comb element are each suspended on flexible supports.
25. (**Canceled**)
26. (Original) The device of claim 24, wherein the flexible supports have nonlinear kinematic-dependent rigidity.
27. (**Currently amended**) The ~~[[devcie]]~~ device of claim 19, wherein the rotor comb element is provided with two substantially opposite torsion bars that define a rotation axis ~~substantually near~~ adjacent an external surface of the rotor comb element.
28. (Original) The device of claim 27, wherein the external surface is an upper surface.
29. (Original) The device of claim 27, wherein the external surface is a bottom surface.
30. (**Currently amended**) The device of claim 19, wherein the thickness of the extensions of said at least one ~~of a plurality of stators~~ stator comb element is greater than the thickness of extensions of the rotor comb element.
31. (**Currently amended**) The device of claim 19, wherein the rotor comb element is positioned in an elevated position with respect to said at least one ~~of a plurality of stators~~ stator comb element.

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32. (**Currently amended**) The device of claim 19, wherein the rotor comb element is positioned in a lowered position with respect to said at least one of a plurality of stators stator comb element.

33. (**Canceled**)

34. (**Currently amended**) The device of claim 19, wherein the rotor comb element comprises a micro-mirror.